CLOSURE COST ESTIMATE WORKSHEET

GENERAL INFORMATION

Closure Plan Date
Month: Year:

Cost Estimate Date
Month: Year:

Prepared By

SITE DESCRIPTION

General Site Information

Name of Solid Waste Landfill

Solid Waste Facilities Permit Number
Waste Discharge Requirement Number

Facility Operator

Site Owner

Site Location
Township/Range
Latitude/Longitude
Assessors Parcel Number

Site Address

Landfill Classification

____Class II ____Class III _____Unclassified

Anticipated closure date
Month : Year:

CLOSURE COST ESTIMATE WORKSHEET

Volume of Waste

1	a1	Estimated in-place volume (gross)		cu yd		0
	a2	Estimated in-place volume (waste)		cu yd		0
	b1	Design site capacity (gross)		cu yd		0
	b2	Design site capacity (waste)		cu yd		0
	c1	Remaining site capacity (gross)	1b1 - 1a1	cu yd		0
	c2	Remaining site capacity (waste)	1b2 - 1a2	cu yd		0
2	a	Minimum thickness of waste		ft		0
	b	Average thickness of waste		ft		0
	c	Maximum thickness of waste		ft		0
	d	Maximum depth of waste (bgs)		ft		0
3	a	Average height above surrounding terrain		ft		0
	b	Typical inclination of side slopes	(horz:vert, e.g., 5:1, 2:1)	ratio		0
4	a	Quantity of waste typically received (landfill average only)		tons/d		0
	b	Average waste density		lbs/cu yd		0
	c	Average waste/cover ratio (by volume)	(e.g., 4:1, etc.)	ratio		0
	d	Percent (%) waste (by volume, decimal)		decimal		0
5		Estimated remaining site life	1c/{[(4a/4b)*2000 lb/t*365 d/y]/4d}	yrs	#DIV/0!	
6	a	Total permitted site acreage		acres		0
	b	Waste disposal area acreage (landfill only)		acres		0

CLOSURE COST ESTIMATE WORKSHEET

CLOSURE COSTS

Final Cover

7	*Area of Landfill for Final Cover*			
a	Area of top deck to be capped	Ad	sq ft	0
b	Area of side slopes to be capped (map area)	As	sq ft	0
c	Conversion Factor		none	0
d	Total Area	Ad + (As x Conv Factor) 7a + (7b x 7c)	sq ft	0

Side Slopes Horizontal : Vertical	Conversion Factor
5:1	1.02
4:1	1.03
3:1	1.05
2.5:1	1.08
2:1	1.12
1.75:1	1.15

CLOSURE COST ESTIMATE WORKSHEET

8	*Soil* (monolayer, foundation, vegetation layer)			
a	Thickness			
a1	Top deck	Td	ft	0
a2	Side slope (measured normal to slope)	Ts	ft	0
b	Volume	[(Td x Ad) + (Ts x As x Conv. factor)]/27 [(8a1 x 7a) + (8a2 x 7b x 7c)]/27	cu yd	0
c	% Native soil (by volume, decimal)		decimal	0.00
d	Native material acquisition cost	8d1 + 8d2 + 8d3	$/cu yd	$0.00
d1	Excavation		$/cu yd	$0.00
d2	Hauling		$/cu yd	$0.00
d3	Other _____		$/cu yd	$0.00
e	Native soil cost	8b x 8c x 8d	$	$0
f	% Imported soil (by volume, decimal)		decimal	0.00
g	Imported material acquisition cost	8g1 + 8g2 +8g3	$/cu yd	$0.00
g1	Purchase		$/cu yd	$0.00
g2	Delivery		$/cu yd	$0.00
g3	Other _____		$/cu yd	$0.00
h	Imported soil cost	8b x 8f x 8g	$	$0
i	Placement, grading and compaction	8i1 + 8i2 + 8i3 + 8i4	$/cu yd	$0.00
i1	Clearing and grubbing		$/cu yd	$0.00
i2	Placement		$/cu yd	$0.00
i3	Grading		$/cu yd	$0.00
i4	Compaction		$/cu yd	$0.00
j	Placement, grading and compaction cost	8b x 8i	$	$0
k	Subtotal soil cost	8e + 8h + 8j	$	$0

CLOSURE COST ESTIMATE WORKSHEET

9	*Clay Layer (if applicable)*			
a	Total Area	7d (will be < 7d if not capping total site)	sq ft	0
b	Thickness		ft	0
c	Volume	(9a x 9b)/27	cu yd	0
d	% Onsite Clay (by volume, decimal)		decimal	0.00
e	Onsite clay acquisition cost		$/cu yd	$0.00
e1	Excavation		$/cu yd	$0.00
e2	Hauling		$/cu yd	$0.00
e3	Other _____		$/cu yd	$0.00
f	Onsite clay cost	9c x 9d x 9e	$	$0
g	% Imported clay (by volume, decimal)		decimal	0.00
h	Imported clay acquisition cost		$/cu yd	$0.00
h1	Purchase		$/cu yd	$0.00
h2	Delivery		$/cu yd	$0.00
h3	Other _____		$/cu yd	$0.00
i	Imported clay cost	9c x 9g x 9h	$	$0.00
j	Placement, grading, compaction	9j1 + 9j2 + 9j3	$/cu yd	$0.00
j1	Placement		$/cu yd	$0.00
j2	Grading		$/cu yd	$0.00
j3	Compaction		$/cu yd	$0.00
k	Placement, grading and compaction cost	9c x 9j	$	$0.00
l	Subtotal clay cost	9f + 9i + 9k	$	$0.00

CLOSURE COST ESTIMATE WORKSHEET

10	*Synthetic Membrane (if applicable)*			
a	Type of membrane (e.g., HDPE, CPE, PVC)			
	Thickness		mil	0
b	Quantity	7d (will be < 7d if not capping total site)	sq ft	0
c	Purchase, delivery and installation cost		$/sq ft	$0.00
c1	Purchase		$/sq ft	$0.00
c2	Delivery		$/sq ft	$0.00
c3	Site Preparation		$/sq ft	$0.00
c4	Installation		$/sq ft	$0.00
c5	Other		$/sq ft	$0.00
e	Subtotal synthetic layer cost	10b x 10c		$0.00
11	*Geosynthetic Clay Layer (if applicable)*			
a	Type of GCL (woven, etc.)			
b	Quantity	7d (will be < 7d if not capping total site)	sq ft	0
c	Purchase, delivery and installation cost		$/sq ft	$0.00
c1	Purchase		$/sq ft	$0.00
c2	Delivery		$/sq ft	$0.00
c3	Site Preparation		$/sq ft	$0.00
c4	Installation		$/sq ft	$0.00
c5	Other		$/sq ft	$0.00
e	Subtotal GCL layer cost	11b x 11c		$0.00

CLOSURE COST ESTIMATE WORKSHEET

12	*Other Layers*			
a	Geosynthetic (grids, textiles, etc.)			
a1a	Type _____			
a1b	Size (thickness)		mil	0
a1c	Quantity	7d (will be < 7d if not for total site)	sq ft	0
a1d	Purchase, delivery and installation cost		$/sq ft	$0.00
a1d1	Purchase		$/sq ft	$0.00
a1d2	Delivery		$/sq ft	$0.00
a1d3	Site Preparation		$/sq ft	$0.00
a1d4	Installation		$/sq ft	$0.00
a1d5	Other		$/sq ft	$0.00
a1e	_____ Layer cost	12a1c x 12a1d	$	$0.00
a2a	Type _____			
a2b	Size (thickness)		mil	0
a2c	Quantity	7d (will be < 7d if not for total site)	sq ft	0
a2d	Purchase, delivery and installation cost		$/sq ft	$0.00
a2d1	Purchase		$/sq ft	$0.00
a2d2	Delivery		$/sq ft	$0.00
a2d3	Site Preparation		$/sq ft	$0.00
a2d4	Installation		$/sq ft	$0.00
a2d5	Other		$/sq ft	$0.00
a2e	_____ Layer cost	12a2c x 12a2d	$	$0.00
b	Other (gravel, asphalt, rock etc.)			
b1a	Type _____			
b1b	Thickness		ft	0
b1c	Area	7d (will be < 7d if not for total site)	sq ft	0
b1d	Volume	(12b1b x 12b1c)/27	cu yd	0
b1e	Purchase, delivery and installation cost		$/cu yd	$0.00
b1e1	Purchase		$/cu yd	$0.00
b1e2	Delivery		$/cu yd	$0.00
b1e3	Site Preparation		$/cu yd	$0.00
b1e4	Installation		$/cu yd	$0.00
b1e5	Other		$/cu yd	$0.00
b1f	_____ Layer cost	12b1d x 12b1e	$	$0.00
b2a	Type _____			
b2b	Thickness		ft	0
b2c	Area	7d (will be < 7d if not for total site)	sq ft	0
b2d	Volume	(12b2b x 12b2c)/27	cu yd	0

CLOSURE COST ESTIMATE WORKSHEET

b2e	Purchase, delivery and installation cost		$/cu yd	$0.00
b2e1	Purchase		$/cu yd	$0.00
b2e2	Delivery		$/cu yd	$0.00
b2e3	Site Preparation		$/cu yd	$0.00
b2e4	Installation		$/cu yd	$0.00
b2e5	Other		$/cu yd	$0.00
b2f	_____ Layer cost	12b1d x 12b1e	$	$0.00
c	Subtotal other layer cost	12a1e + 12a2e + 12b1f + 12b2f	$	$0.00

CLOSURE COST ESTIMATE WORKSHEET

13	*Construction Quality Assurance*			
a	Soil			
a1	Field Tests			
a1a	Test _____			
a1a1	Frequency	(could be #/day)	#/cu yd	0
a1a2	Volume of material	Potentially 8b + 9c	cu yd	0
a1a3	Test Unit Cost		$/test	$0.00
a1a4	Subtotal test cost	13a1a1 x 13a1a2 x 13a1a3	$	$0.00
a1b	Test _____			
a1b1	Frequency	(could be #/day)	#/cu yd	0
a1b2	Volume of material	Potentially 8b + 9c	cu yd	0
a1b3	Test Unit Cost		$/test	$0.00
a1b4	Subtotal test cost	13a1b1 x 13a1b2 x 13a1b3	$	$0.00
a1c	Test _____			
a1c1	Frequency	(could be #/day)	#/cu yd	0
a1c2	Volume of material	Potentially 8b + 9c	cu yd	0
a1c3	Test Unit Cost		$/test	$0.00
a1c4	Subtotal test cost	13a1c1 x 13a1c2 x 13a1c3	$	$0.00
a1d	Test _____			
a1d1	Frequency	(could be #/day)	#/cu yd	0
a1d2	Volume of material	Potentially 8b + 9c	cu yd	0
a1d3	Test Unit Cost		$/test	$0.00
a1d4	Subtotal test cost	13a1d1 x 13a1d2 x 13a1d3	$	$0.00
a1e	Subtotal soil field tests	13a1a4 +13a1b4 +13a1c4 +13a1d4	$	$0.00
a2	Lab Tests			
a2a	Test _____			
a2a1	Frequency	(could be #/day)	#/cu yd	0
a2a2	Volume of material	Potentially 8b + 9c	cu yd	0
a2a3	Test Unit Cost		$/test	$0.00
a2a4	Subtotal test cost	13a2a1 x 13a2a2 x 13a2a3	$	$0.00
a2b	Test _____			
a2b1	Frequency	(could be #/day)	#/cu yd	0
a2b2	Volume of material	Potentially 8b + 9c	cu yd	0
a2b3	Test Unit Cost		$/test	$0.00
a2b4	Subtotal test cost	13a2b1 x 13a2b2 x 13a2b3	$	$0.00
a2c	Test _____			
a2c1	Frequency	(could be #/day)	#/cu yd	0
a2c2	Volume of material	Potentially 8b + 9c	cu yd	0
a2c3	Test Unit Cost		$/test	$0.00
a2c4	Subtotal test cost	13a2c1 x 13a2c2 x 13a2c3	$	$0.00

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a2d	Test _____			
a2d1	Frequency	(could be #/day)	#/cu yd	0
a2d2	Volume of material	Potentially 8b + 9c	cu yd	0
a2d3	Test Unit Cost		$/test	$0.00
a2d4	Subtotal test cost	13a2d1 x 13a2d2 x 13a2d3	$	$0.00
a2e	Subtotal soil lab tests	13a2a4 +13a2b4 +13a2c4 +13a2d4	$	$0.00
a3	Soil tests	13a1e + 13a2e	$	$0.00
b	Synthetics/Other			
b1	Field Tests			
b1a	Test _____			
b1a1	Frequency	(could be #/day)	#/sq ft	0
b1a2	Area of material	Potentially 20b, 21b, 22a1c, 22a2c	sq ft	0
b1a3	Test Unit Cost		$/test	$0.00
b1a4	Subtotal test cost	13b1a1 x 13b1a2 x 13b1a3	$	$0.00
b1b	Test _____			
b1b1	Frequency	(could be #/day)	#/sq ft	0
b1b2	Area of material	Potentially 8b + 9c	sq ft	0
b1b3	Test Unit Cost		$/test	$0.00
b1b4	Subtotal test cost	13b1b1 x 13b1b2 x 13b1b3	$	$0.00
b1c	Test _____			
b1c1	Frequency	(could be #/day)	#/sq ft	0
b1c2	Area of material	Potentially 8b + 9c	sq ft	0
b1c3	Test Unit Cost		$/test	$0.00
b1c4	Subtotal test cost	13b1c1 x 13b1c2 x 13b1c3	$	$0.00
b1d	Test _____			
b1d1	Frequency	(could be #/day)	#/sq ft	0
b1d2	Area of material	Potentially 8b + 9c	sq ft	0
b1d3	Test Unit Cost		$/test	$0.00
b1d4	Subtotal test cost	13bd1 x 13b1d2 x 13b1d3	$	$0.00
b1e	Subtotal soil field tests	13b1a4 +13b1b4 +13b1c4 +13b1d4	$	$0.00
b2	Lab Tests			
b2a	Test _____			
b2a1	Frequency	(could be #/day)	#/sq ft	0
b2a2	Area of material	Potentially 8b + 9c	sq ft	0
b2a3	Test Unit Cost		$/test	$0.00
b2a4	Subtotal test cost	13b2a1 x 13b2a2 x 13b2a3	$	$0.00
b2b	Test _____			
b2b1	Frequency	(could be #/day)	#/sq ft	0
b2b2	Area of material	Potentially 8b + 9c	sq ft	0
b2b3	Test Unit Cost		$/test	$0.00
b2b4	Subtotal test cost	13b2b1 x 13b2b2 x 13b2b3	$	$0.00
b2c	Test _____			
b2c1	Frequency	(could be #/day)	#/sq ft	0
b2c2	Area of material	Potentially 8b + 9c	sq ft	0
b2c3	Test Unit Cost		$/test	$0.00
b2c4	Subtotal test cost	13b2c1 x 13b2c2 x 13b2c3	$	$0.00

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	b2d	Test _____			
	b2d1	Frequency	(could be #/day)	#/sq ft	0
	b2d2	Area of material	Potentially 8b + 9c	sq ft	0
	b2d3	Test Unit Cost		$/test	$0.00
	b2d4	Subtotal test cost	13b2d1 x 13b2d2 x 13b2d3	$	$0.00
	b2e	Subtotal synthetic lab tests	13b2a4 +13b2b4 +13b2c4 +13b2d4	$	$0.00
	b3	Synthetic test	13b1e + 13b2e	$	$0.00
	c	Inspections			
	c1	Frequency (# per day, # per cu yd, etc.)		#/unit	0
	c2	Volume/days/etc.		unit	0
	c3	unit cost		$/unit	$0.00
	c4	Inspection cost	13c1 x 13c2 x 13c3	$	$0.00
	d	Reports			
	d1	Frequency (# per day, # per cu yd, etc.)		#/unit	0
	d2	Volume/days/etc.		unit	0
	d3	unit cost		$/unit	$0.00
	d4	Subtotal Report cost	13d1 x 13d2 x 13d3	$	$0.00
	e	CQA costs	13a3 + 13b3 + 13c4 + 13d4	$	$0.00
14		*Final Cover Subtotal*	8k + 9l +10e + 11e + 12c + 13e	$	$0.00

CLOSURE COST ESTIMATE WORKSHEET

Revegetation

15	*Soil Preparation*			
a	Area (including closed areas to be replanted)		acres	0
b	Preparation unit cost		$/acre	$0.00
c	Soil preparation subtotal	15a x 15b	$	$0
16	*Planting*			
a	Planting unit cost (e.g., seeding, sprigging, plugs)		$/acre	$0.00
b	Planting cost	15a x 16b	$	$0
17	*Fertilizing*			
a	Fertilizer unit cost		$/acre	$0.00
b	Fertilizing cost	15a x 17b	$	$0
18	*Mulching*			
a	Mulch unit cost		$/acre	$0.00
b	Mulching cost	15a x 18b	$	$0
19	*Irrigation installation cost*		$	
20	*Revegetation Subtotal*	15c + 16b+ 17b + 18b + 19		$0

CLOSURE COST ESTIMATE WORKSHEET

Landfill Gas Monitoring and Control

21	*Existing gas monitoring network?*	Yes/No			
	Meets Title 27 CCR Standards?	Yes/No			
	If No,				
a	Number wells needed		#	0	
b	Depth of wells	See 2d	ft	0	
c	Installation cost	21c1 + 21c2 + 21c3	$/ft	$0.00	
c1	Drilling		$/ft	$0.00	
c2	Materials		$/ft	$0.00	
c3	Installation		$/ft	$0.00	
d	Subtotal gas monitoring cost	21a x 21b x 21c	$	$0	
22	*Existing gas control system?*	Yes/No			
	New/enhanced system needed?	Yes/No			
	If Yes,				
a	Number wells needed		#	0	
b	Depth of wells	See 2d	ft	0	
c	Installation unit cost	22c1 + 22c2 + 22c3	$/ft	$0.00	
c1	Drilling		$/ft	$0.00	
c2	Materials		$/ft	$0.00	
c3	Installation		$/ft	$0.00	
d	Subtotal gas control installation cost	22a x 22b x 22c	$	$0	
e	Header/pipeline cost	22e3 + 22e6	$	$0.00	
e1	Pipe unit cost		$/ft	$0.00	
e2	Linear ft needed		ft	0	
e3	Subtotal pipe cost	22e1 x 22e2	$	$0.00	
e4	Well assemblies unit cost		$/well	$0.00	
e5	Number well assemblies	22a	#	0	
e6	Subtotal well assembly cost	22e4 X 22e5	$	$0.00	
f	Other appurtenances (e.g., flare, etc.)		$	$0	
g	Subtotal gas control cost	22d + 22e + 22f	$	$0	
23	*Landfill Gas Subtotal*	21d + 22g	$	$0	

CLOSURE COST ESTIMATE WORKSHEET

Groundwater Monitoring/Remediation

24	*Existing GW monitoring network?*	Yes/No		X
	Meets Title 27 CCR standards?	Yes/No		
	If No,			
a	Number wells needed		#	0
b	Depth of wells		ft	0
c	Installation cost	24c1 + 24c2 + 24c3	$/ft	$0.00
c1	Drilling		$/ft	$0.00
c2	Materials		$/ft	$0.00
c3	Installation		$/ft	$0.00
d	Subtotal GW monitoring cost	24a x 24b x 24c	$	$0
25	*Existing GW remediation system?*	Yes/No		
	New/enhanced system needed?	Yes/No		
	If Yes,			
a	Number wells needed		#	0
b	Depth of wells		ft	0
c	Installation unit cost	25c1 + 25c2 + 25c3	$/ft	$0.00
c1	Drilling		$/ft	$0.00
c2	Materials		$/ft	$0.00
c3	Installation		$/ft	$0.00
d	Subtotal GW remediation installation cost	25a x 25b x 25c	$	$0
e	Header/pipeline cost	25e3 + 25e6	$	$0.00
e1	Pipe unit cost		$/ft	$0.00
e2	Linear ft needed		ft	0
e3	Subtotal pipe cost	25e1 x 25e2	$	$0.00
e4	Well assemblies unit cost		$/well	$0.00
e5	Number well assemblies	25a	#	0
e6	Subtotal well assembly cost	25e4 x 25e5	$	$0.00
f	Other appurtenances (e.g., flare, etc.)		$	$0
g	Subtotal GW remediation cost	25d + 25e + 25f	$	$0
26	*Groundwater subtotal*	24d + 25g	$	$0

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Leachate Control

27	*Existing leachate control system?*	Yes/No		
	New/enhanced system needed?	Yes/No		X
	If Yes,			
a	Header/pipeline cost	27a3 + 27a6	$	$0.00
a1	Pipe unit cost		$/ft	$0.00
a2	Linear ft needed		ft	0
a3	Subtotal pipe cost	27a1 x 27a2	$	$0.00
a4	Header assemblies unit cost		$/well	$0.00
a5	Number Header assemblies		#	0
a6	Subtotal well assembly cost	27a4 x 27a5	$	$0.00
b	Treatment plant cost		$	$0
c	*Leachate subtotal*	27a 27b	$	$0

CLOSURE COST ESTIMATE WORKSHEET

Drainage

28	*Existing SW drainage system?*	Yes/No			
	New/enhancement needed?	Yes/No			
	If Yes,				
a	Drainage channels/down drains/culverts				
a1	_____ Channel cost	28a1a x 28a1b + 28a1c	$	$0	
a1a	Linear feet		ft	0	
a1b	Linear foot unit cost		$/ft	$0.00	
a1c	Entry/exit structures		$	$0	
a2	_____ Channel cost	28a2a x 28a2b + 28a2c	$	$0	
a2a	Linear feet		ft	0	
a2b	Linear foot unit cost		$/ft	$0.00	
a2c	Entry/exit structures		$	$0	
a3	_____ Channel cost	28a3a x 28a3b + 28a3c	$	$0	
a3a	Linear feet		ft	0	
a3b	Linear foot unit cost		$/ft	$0.00	
a2c	Entry/exit structures		$	$0	
a4	Subtotal drainage channels	28a1 + 28a2 + 28a3	$	$0	
b	Berms				
b1	_____ Berm cost	28b1a x 28b1b	$	$0	
b1a	Linear feet		ft	0	
b1b	Linear foot unit cost		$/ft	$0.00	
b2	_____ Berm cost	28b2a x 28b2b	$	$0	
b2a	Linear feet		ft	0	
b2b	Linear foot unit cost		$/ft	$0.00	
b3	Subtotal berms	28b1 + 28b2	$	$0	
c	Drainage/detention basins	28c1 x 28c2 + 28c3	$	$0	
c1	Volume		cu yd	0	
c2	Volume unit cost		$/cu yd	$0.00	
c3	Inlet/outlet structures		$	$0	
d	*Drainage subtotal*	28a4 + 28b3 + 28c	$	$0	

CLOSURE COST ESTIMATE WORKSHEET

	Security				
29	*Existing security?* (e.g., fence, gates, locks, signs, etc.)	Yes/No			
	New/enhanced security needed?	Yes/No			
	If Yes,				
a	Fence	29a1 x 29a2		$	$0
a1	Linear feet			ft	0
a2	Linear feet unit cost			$/ft	$0.00
b	Other (e.g., gates, signs, etc.)			$	$0
c	*Security subtotal*			$	$0
	Structure Removal/Abandonment				
30	*Structures/monitoring to be removed*	Yes/No			
	If Yes,				
a	Structure removal			$0	$0
b	Monitoring well, etc. removal			$0	$0
c	*Structure Removal/Abandonment subtotal*	30a + 30b		$0	$0
	Documents/Reports				
31 a	*Final Closure & Postclosure Maintenance Plan*			$	$0
b	Design & Specifications			$	$0
c	Closure Certification			$	$0
d	*Documents/Reports subtotal*	31a + 31b + 31c		$	$0
	Supplemental Data				
32	Itemize costs on additional worksheets for closure procedures specific to this solid waste disposal site and attach at the end of this worksheet.				
a	*Other - Closure Costs*			$	$0

CLOSURE COST ESTIMATE WORKSHEET

POSTCLOSURE MAINTENANCE COSTS

Note: All costs are to be annual costs.

	Revegetation				
33	*Fertilizing*				
a	Area		acres	0	
b	Unit cost		$/acre	$0.00	
c	Fertilizing cost	33a x 33b	$	$0	
34	*Irrigation*				
a	Quantity		gal/d	0	
b	Unit cost		$/gal	$0.00	
c	Irrigation frequency		d/wk	0	
d	Annual irrigation costs	34a x 34b x 34c x 52 wk/yr	$	$0	
e	Maintenance costs		$	$0	
f	Irrigation costs	34d + 34e	$	$0	
35	*Replanting*				
a	Area		acres	0	
b	Unit cost		$/acre	$0.00	
c	Replanting cost	35a x 35b	$	$0	
36	*Revegetation subtotal*	33c + 34f + 35c	$	$0	
	Erosion Control				
37 a	Area		acres	0	
b	Unit cost		$/acre	$0.00	
c	*Erosion Control Cost*	37a x 37b	$	$0	

CLOSURE COST ESTIMATE WORKSHEET

Monitoring

38	*Gas Monitoring*			
a	Number wells		#	0
b	Sample Testing			
b1	Principal gases			
b1a	Monitoring frequency		#/yr	0
b1b	Sampling unit cost		$	$0.00
b1c	Testing unit cost		$	$0.00
b1d	Subtotal principal gas monitoring	38a x 38b1a x (38b1b + 38b1c)	$	$0
b2	Trace gases			
b2a	Monitoring frequency		#/yr	0
b2b	Sampling unit cost		$	$0.00
b2c	Testing unit cost		$	$0.00
b2d	Subtotal trace gas monitoring	38a x 38b2a x (38b2b + 38b2c)	$	$0
b3	Subtotal sampling cost	38b1d + 38b2d	$	$0
c	Probe replacement			
c1	Frequency		yr	0
c2	Unit cost		$/well	$0
c3	Subtotal replacement cost	(38a x 38c2)/38c1	$	#DIV/0!
d	Maintenance			
d1	Unit cost		$	$0.00
d2	Subtotal maintenance	38a x 38d1	$	$0
e	Gas monitoring subtotal	38b3 + 38c3 + 38d2	$	#DIV/0!

CLOSURE COST ESTIMATE WORKSHEET

39	*Vadose Zone Monitoring*			
a	Number devices		#	0
b	Sample Testing			
b1	Principal parameters			
b1a	Monitoring frequency		#/yr	0
b1b	Sampling unit cost		$	$0.00
b1c	Testing unit cost		$	$0.00
b1d	Subtotal principal parameter monitoring	39a x 39b1a x (39b1b + 39b1c)	$	$0
b2	Other parameters			
b2a	Monitoring frequency		#/yr	0
b2b	Sampling unit cost		$	$0.00
b2c	Testing unit cost		$	$0.00
b2d	Subtotal other parameter monitoring	39a x 39b2a x (39b2b + 39b2c)	$	$0
b3	Subtotal sampling cost	39b1d + 39b2d	$	$0
c	Device replacement			
c1	Frequency		yr	0
c2	Unit cost		$/well	$0
c3	Subtotal replacement cost	(39a x 39c2)/39c1	$	#DIV/0!
d	Maintenance			
d1	Unit cost		$	$0.00
d2	Subtotal maintenance	39a x 39d1	$	$0
e	Vadose zone monitoring subtotal	39b3 + 39c3 + 39d2	$	#DIV/0!

CLOSURE COST ESTIMATE WORKSHEET

40	*Ground Water Monitoring*				
a	Number wells		#		0
b	Sample Testing				
b1	Principal parameters				
b1a	Monitoring frequency		#/yr		0
b1b	Sampling unit cost		$		$0.00
b1c	Testing unit cost		$		$0.00
b1d	Subtotal principal parameter monitoring	40a x 40b1a x (40b1b + 40b1c)	$		$0
b2	Other parameters				
b2a	Monitoring frequency		#/yr		0
b2b	Sampling unit cost		$		$0.00
b2c	Testing unit cost		$		$0.00
b2d	Subtotal other parameter monitoring	40a x 40b2a x (40b2b + 40b2c)	$		$0
b3	Subtotal sampling cost	40b1d + 40b2d	$		$0
c	Well replacement				
c1	Frequency		yr		0
c2	Unit cost		$/well		$0
c3	Subtotal replacement cost	(40a x 40c2)/40c1	$		#DIV/0!
d	Maintenance				
d1	Unit cost		$		$0.00
d2	Subtotal maintenance	40a x 40d1	$		$0
e	Ground water monitoring subtotal	40b3 + 40c3 + 40d2	$		#DIV/0!
41	*Monitoring cost subtotal*	38e + 39e + 40e	$		#DIV/0!

CLOSURE COST ESTIMATE WORKSHEET

Remediation/Control

42	*Gas Remediation/Control*			
	Gas collection/control system?	Yes/No		
	If Yes			
a	System operation & maintenance cost			
a1	No. of Wells		gal	$0
a2	Unit cost		$/gal	$0.00
a3	Subtotal well O&M cost	42a1 x 42a2	$	$0
a4	Other O&M cost		$	$0
a5	Subtotal O&M cost	42a3 + 42a4	$	$0
b	Control			
b1	Onsite control			
b1a	Volume/unit frequency		cf/d	0
b1b	Unit cost		$/cf	$0.00
b1c	Subtotal onsite control cost	42b1a x 42b1b	$	$0
b2	Offsite control			
b2a	Volume/unit frequency		cf/d	0
b2b	Unit cost		$/cf	$0.00
b2c	Subtotal onsite control cost	42b2a x 42b2b	$	$0
b3	Subtotal control cost	42b1c + 42b2c	$	$0
c	Sampling and testing			
c1	Monitoring frequency		#/yr	0
c2	Number of samples/round		#	0
c3	Unit sampling cost		$	$0.00
c4	Unit testing cost		$	$0.00
c5	Subtotal sampling and testing cost	42c1 x 42c2 x (42c3 + 42c4)	$	$0
d	Well replacement			
d1	Number wells		#	0
d2	Frequency		yr	0
d3	Unit cost		$/well	$0
d4	Subtotal replacement cost	(42d1 x 42d3/42d2	$	#DIV/0!
e	Gas remediation/control subtotal	42a5 + 42b3 + 42c5 + 42d4	$	#DIV/0!

CLOSURE COST ESTIMATE WORKSHEET

43	*Leachate Remediation/Control*			
	Leachate collection/removal system?	Yes/No		
	If Yes			
a	System operation & maintenance cost		$	$0
a1	Volume		gal	$0
a2	Unit cost		$/gal	$0.00
a3	Subtotal O&M cost	43a1 x 43a2	$	$0
b	Treatment			
b1	Onsite treatment			
b1a	Volume/unit frequency		gal/d	0
b1b	Unit cost		$/gal	$0.00
b1c	Subtotal onsite treatment cost	43b1a x 43b1b	$	$0
b2	Offsite treatment			
b2a	Volume/unit frequency		gal/d	0
b2b	Unit cost		$/gal	$0.00
b2c	Subtotal onsite treatment cost	43b2a x 43b2b	$	$0
b3	Subtotal treatment cost	43b1c + 43b2c	$	$0
c	Sampling and testing			
c1	Monitoring frequency		#/yr	0
c2	Number of samples/round		#	0
c3	Unit sampling cost		$	$0.00
c4	Unit testing cost		$	$0.00
c5	Subtotal sampling and testing cost	43c1 x 43c2 x (43c3 + 43c4)	$	$0
d	Leachate remediation/control subtotal	43a3 + 43b3 + 43c5	$	$0

CLOSURE COST ESTIMATE WORKSHEET

44	*Ground Water Remediation/Control*			
	GW collection/control system?	Yes/No		
	If Yes			
a	System operation & maintenance cost			
a1	No. of Wells		gal	$0
a2	Unit cost		$/gal	$0.00
a3	Subtotal well O&M cost	44a1 x 44a2	$	$0
a4	Other O&M cost		$	$0
a5	Subtotal O&M cost	44a3 + 44a4	$	$0
b	Treatment/control			
b1	Onsite treatment/control			
b1a	Volume/unit frequency		gal/d	0
b1b	Unit cost		$/gal	$0.00
b1c	Subtotal onsite control cost	44b1a x 44b1b	$	$0
b2	Offsite treatment/control			
b2a	Volume/unit frequency		gal/d	0
b2b	Unit cost		$/gal	$0.00
b2c	Subtotal onsite control cost	44b2a x 44b2b	$	$0
b3	Subtotal control cost	44b1c + 44b2c	$	$0
c	Sampling and testing			
c1	Monitoring frequency		#/yr	0
c2	Number of samples/round		#	0
c3	Unit sampling cost		$	$0.00
c4	Unit testing cost		$	$0.00
c5	Subtotal sampling and testing cost	44c1 x 44c2 x (44c3 + 44c4)	$	$0
d	Well replacement			
d1	Number wells		#	0
d2	Frequency		yr	0
d3	Unit cost		$/well	$0
d4	Subtotal replacement cost	(44d1 x 44d3/44d2	$	#DIV/0!
e	GW remediation/control subtotal	44a5 + 44b3 + 44c5 + 44d4	$	#DIV/0!
45	*Remediation/control cost subtotal*	42e + 43d + 44e	$	#DIV/0!

CLOSURE COST ESTIMATE WORKSHEET

Drainage

46	a	Channels			
	a1	Length		ft	0
	a2	O&M unit cost		$/ft	$0.00
	a3	Subtotal O&M cost	46a1 x 46a2	$	$0
	b	Berms			
	b1	Length		ft	0
	b2	O&M unit cost		$/ft	$0.00
	b3	Subtotal O&M cost	46b1 x 46b2	$	$0
	c	Drainage basins			
	c1	Volume		gal	0
	c2	O&M unit cost		$/gal	$0.00
	c3	Subtotal O&M cost	46c1 x 46c2	$	$0
	d	Erosion control			
	d1	Area		acres	0
	d2	O&M unit cost		$/acre	$0.00
	d3	Subtotal O&M cost	46d1 x 46d2	$	$0
	e	*Drainage subtotal*	46a3 + 46b3 + 46c3 + 46d3	$	$0

Security

47	*Security subtotal (e.g., O&M costs for repair/replace fence, gate, etc.)*		$	$0

Inspection/Reporting

48	a	Inspection			
	a1	Frequency		#/yr	0
	a2	Unit cost		$/#	$0.00
	a3	Subtotal inspection cost	48a1 x 48a2	$	$0
	b	Reporting			
	b1	Frequency		#/yr	0
	b2	Unit cost		$/#	$0.00
	b3	Subtotal reporting cost	48b1 x 48b2	$	$0
	c	*Inspection/Reporting subtotal*	48a3 + 48b3	$	$0

Supplemental Data

49	Itemize costs on additional worksheets for postclosure maintenance procedures specific to this solid waste disposal site and attach at the end of this worksheet.			
	a	*Other- Postclosure Maintenance Costs:*	$	$0

CLOSURE COST ESTIMATE WORKSHEET

SUMMARY OF COST ESTIMATES

Facility Name: 0
SWIS: 0

Closure

	Final Cover	Line 14	$0
	Revegetation	Line 20	$0
	Landfill Gas Monitoring and Control	Line 23	$0
	Groundwater Monitoring/Remediation	Line 26	$0
	Leachate Control	Line 27c	$0
	Drainage	Line 28d	$0
	Security	Line 29c	$0
	Structure Removal/Abandonment	Line 30c	$0
	Documents/Reports	Line 31d	$0
	Other Closure Costs	Line 32a	$0
50	I. Subtotal		$0
51	II. 20% Contingency Costs	Subtotal I x 20%	$0
52	III. Total Closure Cost	Subtotal I + Contingency	$0

Postclosure Maintenance

	Revegetation	Line 36	$0
	Erosion Control	Line 37c	$0
	Monitoring	Line 41	#DIV/0!
	Remediation/Control	Line 45	#DIV/0!
	Drainage	Line 46e	$0
	Security	Line 47	$0
	Inspection/Reporting	Line 48c	$0
	Other	Line 49a	$0
53	IV. Subtotal (Annual Maintenance Cost)		#DIV/0!
54	V. Total Postclosure Maintenance Cost	Subtotal IV x 30	#DIV/0!
55	TOTAL COST (Item III + Item V)		#DIV/0!